

*dentata*, *Platanus occidentalis*, *Magnolia virginiana*, *Cebatha carolina*, *Philadelphus inodorus*, *Persea borbonia*, *Sassafras officinale*, *Gaylussacia dumosa*, and *Viburnum alnifolium*. All of these plants are still thriving species although three of them no longer range this far north. But the Pensauken rocks were laid down during an interglacial period of the Pleistocene, or perhaps before the Jerseyan glaciation.

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## BOOK REVIEWS

### **Basic Course in Botany\***

J. W. THOMSON, JR.

The aim of this new addition to the ever-increasing list of textbooks in general introductory botany is an attempt "to emphasize the essentials of science, and especially the broad, biological point of view, more consciously and persistently than is done in similar works." To achieve this aim, the first two chapters are devoted to "the point of view" and "biological fundamentals," and throughout the book an introduction to each topic stresses generalizations which are then discussed in greater detail.

In general content the new text is similar to previous texts. After a consideration of plant cells and their activities, the tissues and organs of the plant; roots, stems, leaves, flowers, fruits and seeds are taken up. The activities of the organs are discussed in the same chapters as the structures. Following the chapters upon anatomy and physiology, the plant kingdom is well covered in eight chapters. The chapters "plants and their environment" and "plant communities and vegetation regions" give, as would be expected from Dr. Pool, a better consideration of plant ecology than many other general texts. These chapters are limited to North American vegetation. Pathology and heredity and evolution are also given chapters.

While some of the diagrams intended to simplify general principles seem unnecessarily complicated, and some of the photographs

\* Basic Course in Botany. Raymond J. Pool. v + 654 pages. Ginn and Co. 1940. \$3.75.

such as those of *Selaginella* and lichens forming a turf, or scales on the bark of the ponderosa pine, would not be clear to the student, the choice of illustrations on the whole is good. One would wish, perhaps, for more thorough labeling of parts. An interesting variation from most texts is the number of illustrations taken from old sources; Hooke, Grew, Mattioli, and Linnaeus.

The Pool text is an excellent addition to the more complete type of treatments of introductory botany and will prove valuable to those who wish to utilize in a full year course the particular point of view as well as thoroughness of text which is presented.

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### Liverworts of Southern Michigan\*

M. FULFORD

In a concise little book, *Liverworts of Southern Michigan*, Dr. Steere has given a non-technical treatment of the local species whereby a beginner may, of his own accord, either in the field or laboratory, learn to recognize and identify the various local species with the aid of a good hand lens.

After an introductory section in which the author discusses briefly and clearly the structure and classification of liverworts, where they grow and how to preserve them, the genera and species are described. These descriptions are brief and to the point, but give ample details of the plants involved.

The *Key to the Genera* is particularly good and should afford no serious difficulties for the beginner. The photographs by Dr. E. B. Mains and the line drawings by Miss Embry are excellent.

The author has admirably accomplished his purpose, and we are sure that anyone wishing to begin the study of hepatics in this region will find this book to be of great assistance. We only wish that more species of these infrequently recognized little plants grew in Southern Michigan.

The book is another of the series of manuals of Natural History pertaining to Southern Michigan but of use over a much wider area.

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\* *Liverworts of Southern Michigan*. William Campbell Steere. Cranbrook Institute of Science. Bull. 17. 97 pages. 22 plates. Bloomfield Hills, Michigan. Price \$0.50 paper. \$1.00 waterproof cloth.